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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,774	10/30/2001	Mark J. Buxton	42390P12443	6128

8791 7590 08/11/2006

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EXAMINER

NGUYEN, TU X

ART UNIT PAPER NUMBER

2618

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/017,774	Applicant(s) BUXTON ET AL.	
	Examiner Alejandro Rivero	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 & 15-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Response to Arguments

1. Applicant's arguments filed 5/30/2006 have been fully considered but they are not persuasive.

Applicant argues that Logan and Bocci do not disclose "determining if said broadcast segment contains a valid signal content for a database, wherein said signal database is a plurality of stored signals". The examiner respectfully disagrees because in column 9 lines 26-51, Logan discloses an identification signal that is correlated to verify if it is a match (valid) with another segment within the identification signal memory.

Applicant also argues that Logan discloses an identification signal that is not programming content and does not disclose (as in claim 24) "a portion of said received signal, wherein the portion of said received broadcast signal includes broadcast media content". The examiner respectfully disagrees because Logan discloses in column 9 lines 26-51 that the comparator searches the data signal representative of the broadcast programming signal for the occurrence of one or more of those known segments by identifying an identification signal stored within the identification signal memory and representative of the known segment. In lines 17-20 of column 9, Logan discloses that an identification signal is representative of a portion of a known segment of the broadcast programming signal, hence it is broadcast media content.

Specification

2. The examiner accepts the changes made to the specification and the objection to the specification of the previous Office Action is withdrawn.

The specification is objected to because it does not include the proper content as outlined below:

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR

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1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Appropriate correction is required.

Claim Objections

3. Claim 28 is objected to because of the following informalities:

In line 2 of claim 28, the examiner respectfully suggests replacing “based comparing the descriptor to a plurality of descriptor stored” with “based on comparing the descriptor to a plurality of descriptors stored”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The examiner accepts the changes made to claim 20 and the 35 U.S.C 112 rejection of claim 20 of the previous Office Action is withdrawn.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-13 and 15-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Logan et al. (US 6,931,451 B1).

Consider claim 1, Logan et al. disclose a method comprising: receiving a broadcast signal from a broadcast source (Column 5 lines 53-56); selecting a broadcast segment of said broadcast signal (Column 2 lines 54-60); determining if said broadcast segment contains a valid signal content for a signal database (Column 9 lines 26-51), wherein said signal database is a plurality of stored signals (Column 9 lines 45-51); and, modifying (storing the segment) said signal database with signal information from a portion of said broadcast segment (Column 2 line 64 to column 3 line 2, column 4 lines 21-22) if said broadcast segment contains a valid signal content (Column 9 lines 45-51).

Consider claims 2 and 4, Logan et al. disclose all the limitations as applied to claim 1 above and also disclose wherein receiving a broadcast signal comprises receiving an audio signal (as in claim 2) and receiving a signal from a network (as in claim 4) (Column 6 lines 10-15).

Consider claim 5, Logan et al. disclose all the limitations as applied to claim 1 above and also disclose wherein determining if said broadcast segment contains a valid

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signal content includes: selecting a portion of said broadcast segment (Column 2 lines 54-60); measuring at least one signal characteristic value of said portion and comparing said signal characteristic value to a pre-determined threshold (Column 9 line 52 to column 10 line 19).

Consider claim 6, Logan et al. disclose all the limitations as applied to claim 1 above and also disclose wherein determining if said broadcast segment contains a valid signal content includes: generating a signal descriptor (attribute) for a portion of the broadcast segment (Column 4 lines 27-33); computing an equivalence value (correlation) for said signal descriptor and a descriptor in a descriptor database and comparing said equivalence value to a predetermined threshold (Column 9 line 52 to column 10 line 19).

Consider claims 10, 11, 12 and 13, Logan et al. disclose all the limitations as applied to claim 6 above and also disclose wherein computing said equivalence value includes calculating a correlation coefficient (as in claim 10), which is a likeness coefficient (as in claim 11) by selecting/measuring a portion/characteristic of the broadcast segment as a signal descriptor (as in claims 12 and 13) (Column 9 line 52 to column 10 line 19).

Consider claims 15 and 16, Logan et al. disclose all the limitations as applied to claim 13 above and also disclose wherein measuring at least one signal characteristic includes measuring a signal amplitude (as in claim 15) and a signal frequency (as in claim 16) (Column 9 lines 55-58, where Logan et al. disclose using the comparator disclosed in US patent 4,843,562 issued to Kenyon et al., Logan et al. inherently

disclose measuring amplitude and frequency since the correlator of Kenyon et al. performs both measurements).

Consider claim 17, Logan et al. disclose a machine readable storage medium having stored thereon instructions to be executed by a processor (Column 6 lines 49-55), the execution of said instructions to implement a method comprising: receiving a broadcast signal from a broadcast source (Column 5 lines 53-56); selecting a broadcast segment of said broadcast signal (Column 2 lines 54-60); determining if said broadcast segment contains a valid signal content for a signal database (Column 9 lines 45-51), wherein said signal database is a plurality of stored signals (Column 9 lines 45-51); and, modifying (storing the segment) said signal database with signal information from a portion of said broadcast segment (Column 2 line 64 to column 3 line 2, column 4 lines 21-22) if said broadcast segment contains a valid signal content (Column 9 lines 45-51).

Consider claims 8 and 19, Logan et al. disclose all the limitations as applied to claims 1 and 17 and also disclose wherein modifying said signal database includes updating at least one portion of a signal in the signal database with signal information from a portion of the broadcast segment (Column 3 lines 20-43, column 10 lines 20-39).

Consider claim 20, Logan et al. disclose a system comprising: a receiver to receive a broadcast signal (Column 5 lines 53-56); a first memory coupled with said receiver to store a broadcast signal segment; a processor coupled with said first memory to process said broadcast signal (Column 2 line 64 to column 3 line 2), wherein processing comprises: selecting a broadcast segment of said broadcast signal (Column 2 lines 54-60); determining if said broadcast segment contains a valid signal content for

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a signal database (Column 9 lines 45-51), wherein a signal database is a plurality of stored signals (Column 9 lines 45-51); and modifying (storing the segment) said signal database with signal information from a portion of the selected broadcast segment (Column 2 line 64 to column 3 line 2, column 4 lines 21-22) if said broadcast segment contains a valid signal content (Column 9 lines 45-51); a second memory coupled with said processor to store a signal database (Column 10 lines 40-42, figure 2 element 52); and a third memory coupled with said processor to store a descriptor database (Column 9 lines 17-20, figure 2 element 64).

Consider claim 21, Logan et al. disclose all the limitations as applied to claim 20 above and also disclose a fourth memory coupled with said processor to store an identification database, wherein said identification database contains information associated with a signal in the signal database and a descriptor in the descriptor database (Column 12 lines 15-22, figure 3 element 80).

Consider claims 22 and 23, Logan et al. disclose all the limitations as applied to claim 20 above and also disclose wherein the first, second and third memory devices are in system memory (as in claim 22) or separate devices (as in claim 23) (Column 3 lines 16-19, where Logan et al. disclose having a local (system) database memory or remote (separate) database or a combination of both).

Consider claim 24, Logan et al. disclose an apparatus comprising: a receiver to receive a broadcast signal (Column 5 lines 53-56); a selector (data processor) to select a portion of said received broadcast signal wherein the portion of said received broadcast signal includes broadcast media content (Column 2 lines 54-60); an identifier

to identify at least one signal characteristic (attribute) of said portion (Column 4 lines 27-33, column 11 lines 3-13); a database to store signal information (Column 9 lines 17-20); and a modifier (processor) to modify (store the segment) said database with signal information from said portion (Column 6 lines 49-55, column 2 line 64 to column 3 line 2, column 4 lines 21-22).

Consider claim 25, Logan et al. disclose all the limitations as applied to claim 24 above and also disclose wherein the identifier further includes a descriptor (attribute) generator (Column 4 lines 27-33).

Consider claims 3, 9 and 26, Logan et al. disclose all the limitations as applied to claims 1 and 24 above and also disclose receiving an analog (as in claim 3) radio broadcast signal (as in claim 26) and digitizing it (as in claim 9) (Column 5 lines 53-65).

Consider claims 7 and 18, Logan et al. disclose all the limitations as applied to claims 1 and 17 above and also disclose a modifier (processor) for modifying (storing the segment) said signal database by adding a portion of said broadcast segment to said signal database (Column 6 lines 49-55, column 2 line 64 to column 3 line 2, column 4 lines 21-22, reads on claims 7 and 18).

Consider claim 27, Logan et al. disclose an apparatus for generating a descriptor comprising: selecting a portion of broadcast media signal as the descriptor; and measuring a signal characteristic of the selected portion and assigning the measured signal characteristic, wherein the signal characteristic includes amplitude levels, frequency content, and signal-to-noise ratio (SNR) of the selected portion (Column 4

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lines 21-33, column 13 line 60-column 14 line 22, where Logan et al. disclose modifying the identified segment to improve the signal-to-noise ratio).

Consider claim 28, Logan et al. disclose all the limitations as applied to claim 27 above and also disclose a modifier (processor) to modify (storing the segment) a signal database based on comparing the descriptor to a plurality of descriptors stored in a descriptor database (Column 2 line 64-column 3 line 2, column 4 lines 21-22, column 6 lines 49-55 of Logan et al.).

Consider claims 29 and 30, Logan et al. disclose all the limitations as applied to claim 27 above and also disclose a selector (data processor) to select a portion of said received broadcast signal (Column 2 lines 54-60 of Logan et al.) and an identifier to identify at least one signal characteristic (attribute) of said portion (Column 4 lines 27-33, column 11 lines 3-13 of Logan et al.).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al. in view of Bocci et al. (US 4,710,945).

Consider claim 14, Logan et al. disclose all the limitations as applied to claim 8 above and also disclose updating at least one portion of a signal in the signal database with signal information from a portion of said broadcast segment, combining a portion of said broadcast segment with a portion of a signal in the signal database resulting in a combined signal and storing the signal in the signal database (Column 3 lines 20-43, column 10 lines 20-39, column 13 line 60-column 14 line 22).

However, Logan et al. do not disclose averaging.

Bocci et al. disclose averaging (Column 4 line 58 to column 5 line 5).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to average a portion of said broadcast segment with a portion of a signal in the signal database resulting in an average signal in the system of Logan et al. by averaging signals as taught by Bocci et al. for the purpose of providing improved signal selection based on statistical analysis of received signals (as suggested by Bocci et al. in column 1 line 57 to column 2 line 3, and by Logan et al. in column 13 line 60-column 14 line 22).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alejandro Rivero whose telephone number is (571) 272-2839. The examiner can normally be reached M-F, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR

Quochien B. Vuong 8/4/06
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PRIMARY EXAMINER